

From: [Kristen Keteles](#)
To: jboid@dia.net
Cc: [Joshua Rickard](#); jsemerad@nd.gov; [Barbara Barron](#)
Subject: Germanium concern
Date: 11/24/2010 08:50 AM

Dear Ms. Schilke,

I received your inquiry concerning elevated germanium blood levels. Your email reported a blood level of 52mcg/mL. Typically metal blood levels are reported in micrograms per deciliter. Can you confirm the concentration from your lab results?

Germanium is not considered toxic (of course anything in high enough amounts can be toxic). In fact, at one time germanium was used in supplements because it was believed to prevent cancer. However, as I mentioned anything in a high enough amount can be toxic and people that had taken the supplements often experienced adverse health effects such as heart problems. and kidney damage. People that experienced symptoms of germanium toxicity were either exposed to high levels by taking supplements or through occupational exposure. Germanium occurs naturally in bedrock and can be present in well water and is also present in very low amounts in food, particularly brans, legumes, and tomatoes. Most people are exposed to very small amounts in food. If you are on private well water, I would recommend having your water tested to determine if the source is through the well water.

With your elevated germanium blood levels, I am curious if you are experiencing any symptoms such as fatigue, weight loss, muscle weakness? Also has your physician checked your kidney function? I would be happy to talk to you further about this issue or any concerns about exposures.

Best,

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